

WHAT IS CLAIMED IS:

1. An image sensor to be electrically connected to a printed circuit board, the image sensor comprising:
 - a plurality of lower metal sheets arranged in an array, each of the lower metal sheets having an upper surface and a lower surface;
 - a plurality of upper metal sheets arranged in an array, each of the upper metal sheets having an upper surface and a lower surface, the lower surfaces of the upper metal sheets being stacked on the upper surfaces of the lower metal sheets;
- 10 an encapsulant for encapsulating the lower metal sheets and the upper metal sheets, wherein the upper surfaces of the upper metal sheets are exposed from the encapsulant, the lower surfaces of the lower metal sheets are exposed from the encapsulant and electrically connected to the printed circuit board, and the encapsulant is formed with a frame layer around the upper surfaces of the upper metal sheets to define a chamber together with the upper metal sheets;
- 15 a photosensitive chip arranged within the chamber;
- a plurality of wires for electrically connecting the photosensitive chip to the upper surfaces of the upper metal sheets; and
- a transparent layer arranged on the frame layer of the encapsulant to cover the photosensitive chip.

2. The image sensor according to claim 1, further comprising a middle board arranged among and flush with the upper metal sheets, and the photosensitive chip being mounted to the middle board.

3. The image sensor according to claim 1, wherein the encapsulant is made of industrial plastic material, and the encapsulant and the frame layer are integrally formed.

4. The image sensor according to claim 1, wherein the transparent layer is a piece of transparent glass.

5. A method for packaging an image sensor, comprising the steps of:
10 providing a plurality of lower metal sheets arranged in an array, each of the lower metal sheets having an upper surface and a lower surface;

providing a plurality of upper metal sheets arranged in an array, each of the upper metal sheets having an upper surface and a lower surface, the lower surfaces of the upper metal sheets being stacked on the upper surfaces of the
15 lower metal sheets;

providing an encapsulant for encapsulating the lower metal sheets and the upper metal sheets, wherein the upper surfaces of the upper metal sheets are exposed from the encapsulant, the lower surfaces of the lower metal sheets are exposed from the encapsulant and electrically connected to a printed circuit board,
20 and the encapsulant is formed with a frame layer around the upper surfaces of the upper metal sheets to define a chamber together with the upper metal sheets;

arranging a photosensitive chip within the chamber; and
arranging a transparent layer on the frame layer of the encapsulant to cover
the photosensitive chip.

6. The method according to claim 5, further comprising:

5 arranging a middle board among and flush with the upper metal sheets, and
the photosensitive chip being mounted to the middle board.

8. The method according to claim 5, wherein the encapsulant and the frame
layer are formed from industrial plastic material by way of injection molding.